

Part 1 — EXECUTIVE SUMMARY

Background

The world is changing faster now than ever before. Futurists and other trend watchers expect more change in the next 50 years than has been seen in modern history. Technology makes it possible for us to do things better and quicker and more efficiently than ever. In order for Michigan transportation agencies to respond effectively to this constantly changing world, we must change our current way of financing transportation.

Significant sums of money are at stake. Some \$1.7 billion in state transportation revenues are distributed each year by the formulas of Public Act 51 of 1951. In addition, the state transportation budget bill distributes another \$1 billion in federal aid to surface transportation.

The Act 51 formulas, initiated nearly half a century ago, rely on jurisdictional boundaries and designated road “legal” systems. The funds go to the Michigan Department of Transportation, county road commissions, and cities and villages for maintenance and construction of roads and support of public transit systems. The formulas do not necessarily allow the funding flexibility required to respond to the rapidly changing needs of today’s transportation customers.

The Transportation Funding Study Committee was formed against this background. The Committee, created under the Michigan Public Act 308 of 1998, was called upon to study transportation funding issues, to weigh information from affected agencies and interest groups, and to make recommendations for the future. To meet this challenge, Committee members were chosen both from members of the Legislature and of the business community, in areas concerned with transportation.

According to Public Act 308, the current formulas will expire on September 30, 2000. After that date, only distributions for debt service will be made until a new formula is enacted. This deadline encouraged us to focus on transportation funding and related issues so as to come to timely conclusions, despite the broad array of information that required our consideration. We were also aware that, due to the subject matter of Act 51, most of our attention would be directed at the highway mode of transportation. However, we acknowledge that the highway is but one mode in an interconnected transportation system that, in Michigan, includes air, rail, marine, transit, and non-motorized. The importance which we place upon intermodalism is reflected in our Mission statement on the following page.

In our efforts, we reviewed hundreds of pages of written testimony and staff-prepared information. We listened to verbal testimony from more than 20 individuals on behalf of organizations representing several thousand members. Our recommendations were also subjected to the review and comment of a 24-member Citizens Advisory Committee, which provided additional collective representation for thousands of individual members (see Note, below). Based on this feedback from Michigan’s transportation providers and customers, we believe that the dawning of the 21st century is the right time to recommend significant changes in the way the transportation system will be managed in the future.

Note: Appendix B to the full report contains summaries of the testimony given before our Committee. Appendix G to the full report contains the comments of the Citizens Advisory Committee in their entirety.

Committee Vision, Mission, and Values

Early in our discussions, we agreed to a *Vision* statement for the future of transportation in Michigan. In order to address what would be needed to achieve that vision, we identified a *Mission* statement containing several specific goals. Underlying both statements are our *Values*, which are shown in the table below in rank order.

COMMITTEE VISION, MISSION, AND VALUES	
Vision	In ten years Michigan will have the best multi-modal transportation system in North America as compared to other states and countries and as measured by customer satisfaction.
Mission	<p>To move people and goods safely, efficiently, and economically by:</p> <ul style="list-style-type: none"> • Providing continuous improvement from an established baseline • Achieving uniform weight limits by road classification • Increasing predictability in the transportation system • Improving transportation safety • Increasing use of “Smart Road” technology (ITS) • Establishing a maintenance program which is uniform across jurisdictions • Expanding intermodalism.
Values	<p>Customer-focused Cost-efficient Result-oriented Committed to continuous improvement from an established baseline Accountability Trust - among stakeholders and between stakeholders and customers Recognizes social, environmental, and aesthetic issues</p>

Recommendations

The key Committee recommendation is to use a long-term, planned asset management approach on a statewide basis for transportation facilities. The process of asset management and twelve related recommendations are discussed below. In recommending the asset management approach, we are confident that it will take into account the importance of all roads and that they will be represented in equal respect regardless of ownership, according to their relative significance in the overall transportation system.

We made seven other important recommendations, in areas not directly related to asset management. These have to do with increasing the level of interaction among transportation and other agencies, and retaining the revenue raised in the transportation sector for expenditure on transportation infrastructure.

The members of the Committee reached consensus for most of the recommendations which are outlined below and which are given fuller explanation in Part 3 of the full report. While our Committee discussions often reflected contrasting points of view, we believe this set of final recommendations are the first steps in achieving what is important to everyone — bringing our transportation management and funding system into the 21st century.

Given economic trends and other cost indicators, it is possible that sufficient funds will not be available to achieve the goals implied by our vision and mission statements. Because of continuing cost increases we believe it is critical for the Legislature to consider future funding needed both to sustain existing levels of service, and to address currently unmet transportation needs, as appropriately measured. Moreover, future funding must anticipate rising levels of customer demand. For more information about future trends, refer to Part 4 of the full report.

Asset Management and Related Recommendations

The Committee recommends that a long-term, planned asset management process be extended to statewide use for transportation facilities.

Widely used in the private sector, *asset management* is beginning to be used more extensively in the public arena. The Committee, with a mix of members from the business world and the Legislature, finds that Michigan would benefit from this type of modern management approach to its transportation infrastructure assets. A number of other Committee recommendations are linked to the proposed use of asset management. Flow Chart 1, which appears on the page 8, illustrates how these recommendations interact as components of an asset management approach.

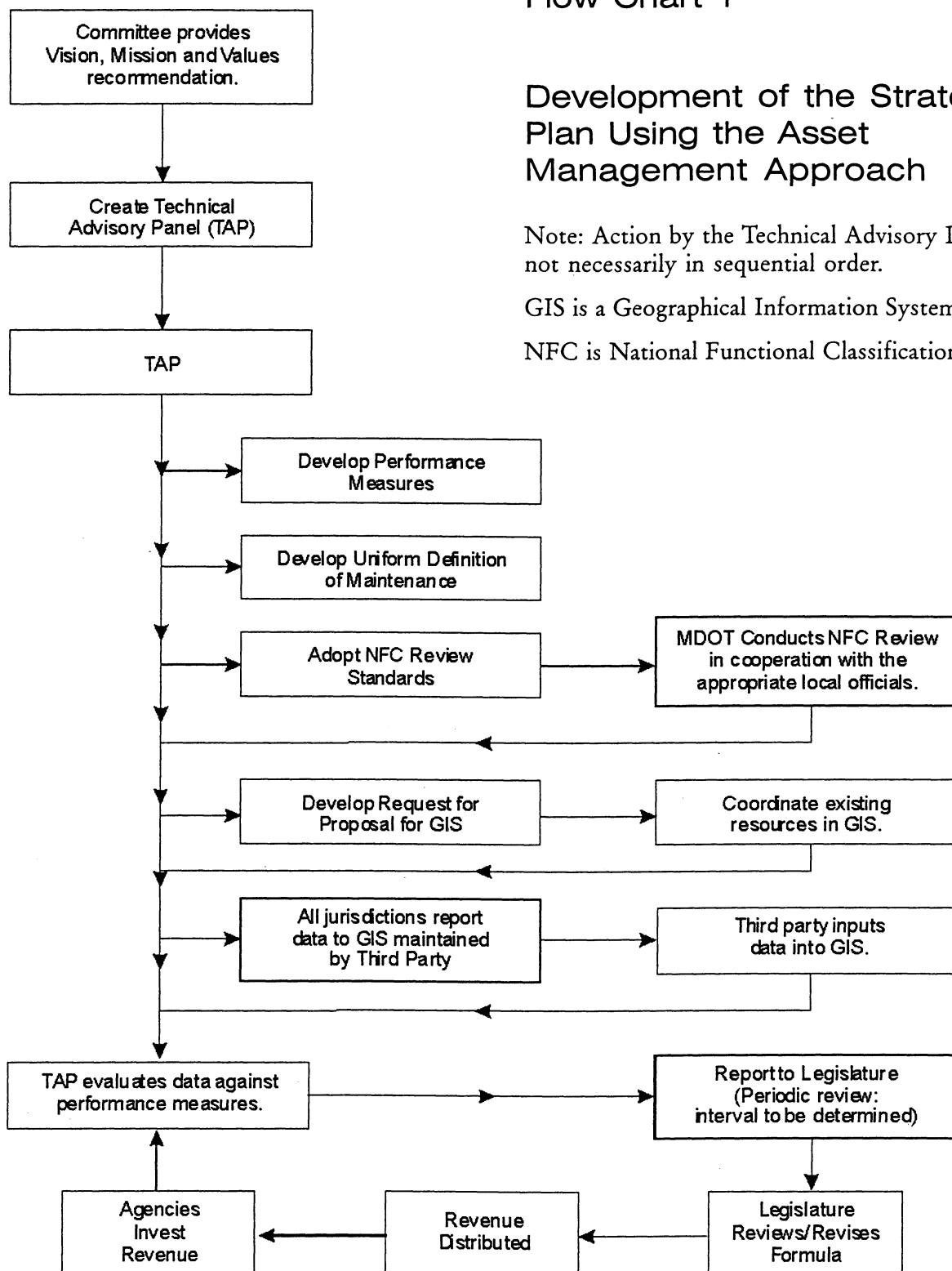
Flow Chart 1

Development of the Strategic Plan Using the Asset Management Approach

Note: Action by the Technical Advisory Panel is not necessarily in sequential order.

GIS is a Geographical Information System

NFC is National Functional Classification



To explain what asset management is and how it can be used in transportation, we have referenced an October 1997 report sponsored by the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA): 21st Century Asset Management: Executive Summary. The entire document is attached as Appendix F to the full report. Selected excerpts appear below, with page citations to the document.

Excerpts from <u>21st Century Asset Management: Executive Summary</u>
<p>“Asset management is a systematic process of maintaining, upgrading, and operating physical assets cost-effectively. In the broadest sense, the assets of a transportation agency include physical infrastructure such as pavements, bridges and airports . . . Each transportation agency has a unique inventory of assets, many with common attributes.” —Page 2</p>
<p>“The practice of asset management:</p> <ul style="list-style-type: none"> • makes better and more objective information available to the decision making process; • provides the critical ability to clearly demonstrate the implications of all investment alternatives; • improves decision-making and enhances productivity, which translate into savings of time and money; and • enables the agency to obtain maximum benefit from whatever level of funding the budget process provides.” —Page 2
<p>“Most agencies set explicit policies and goals and evaluate the success of their asset management strategies bases on trends in facility condition. Executives agree that new performance-based measures and knowledge of associated economic implications are needed to support more strategic decision-making. Pavement and bridge management systems are good examples of tools that facilitate performance-based monitoring.” —Page 5</p>
<p>“New performance-based measures should be consistent with the decision-making environment of each organization and the needs of customers. For example, legislators and the general public are sensitive to performance parameters such as:</p> <ul style="list-style-type: none"> • smoothness of ride and overall quality of service; • timeliness of travel and overall mobility on the system; • accessibility provided to all areas by the system; and • availability of facilities (whether facilities are always open).” —Page 5
<p>“The change from measurement of condition to measurement of performance is consistent with the need for transportation agencies to be more customer-oriented. Performance-based measures will help decisions to become more strategic, and less condition-driven.” —Page 6</p>

Anticipated Benefits of Asset Management:

- An improved ability to prioritize transportation investments throughout the entire system, and to increase accountability and effectiveness.
- A proactive step toward achieving conformity with new, federal financial reporting requirements for state and local governmental infrastructure assets.

The Committee recommends that system performance measures, along with associated standards and criteria, be selected by the Technical Advisory Panel for all elements of the roadway infrastructure.

- *Measuring the performance* of the system components is the essential element of any asset management process. Performance measures will indicate whether investments made are both appropriate and effective.
- Performance measures should be selected so as to support the Committee Vision, Mission, and Values, shown on page 6.
- Performance measures should reflect expectations based on a road's relative significance in the overall transportation system, in other words, how the road is used or functions.
- Performance expectations for higher function facilities — regardless of jurisdiction — should be set to a higher standard.

Anticipated Benefits of Performance Measures:

- An ability to determine appropriate levels of investment and to evaluate progress toward our goals.
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The Committee recommends that road and bridge data for all jurisdictions be collected and maintained in a statewide Geographic Information System (GIS), under the direction of a Technical Advisory Panel, and through the coordination of existing resources.

- An asset management approach using performance measures and outcomes to reflect investment decisions requires that *common data items* be collected from all jurisdictions.
- The most up-to-date technology for storing and maintaining centralized data should be used, that is, a *Geographic Information System*, or GIS. GIS resources already exist in Michigan, and transportation data collection should be coordinated with these existing resources.

Anticipated benefits of a statewide GIS:

- The data collection in the GIS will be ongoing and will include condition ratings, thus providing up-to-date information for assessing transportation needs.

The Committee recommends that a systematic, statewide review of National Functional Classification (NFC) designations be conducted for roads under all jurisdictions to ensure they are appropriately designated according to their use, per federal guidelines.

- As a key element in utilizing the asset management process for attaining system performance expectations, it is essential that every road segment in Michigan have the *functional classification* which reflects its up-to-date use and significance within the overall transportation system.
- University and other institutional roads should be included in the NFC review to the extent that such roads are open to public use. By using the same NFC criteria for these roads as for other public roads, we can determine which, if any, function at a higher level, and therefore require consideration (including the option of jurisdictional transfer) to ensure that the appropriate system performance expectations are met.

Anticipated benefits of a statewide NFC review:

- An ability to compare all roads, regardless of jurisdiction, according to the appropriate performance standards, ultimately leading to “the money follows the roads.”
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The Committee recommends that the asset management process include standards, criteria, and performance measures for the designation of an all-season road system, serving all significant points of loading origin and essential commodity haul routes, and composed of routes from all jurisdictions as needed for connectivity and continuity.

- Commercial vehicles need a connected and continuous *all-season system of roads*. The all-season portion of the state trunkline system combined with all-season county roads and city streets forms a partial network, but there are system gaps that should be addressed

Anticipated benefits of a connected and continuous all-season system of roads:

- Once the system gaps are addressed, that part of the economy which depends upon year-round commercial trucking will be improved.

The Committee recommends that the asset management process be a vehicle to provide incentives to reward additional regional coordination and planning among and between road and transit agencies.

- The asset management approach considers the transportation system as a whole rather than by each jurisdictional segment, thus requiring *regional coordination*.

Anticipated benefits of additional regional coordination:

- Adding to the regional coordination which already exists will result in greater customer satisfaction and cost-efficiencies, as well as more consistency in transportation services provided, with less duplication.
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The Committee recommends that the Technical Advisory Panel develop a uniform definition of maintenance and that the Legislature revise current transportation laws to incorporate the definition.

- *A definition of maintenance* which is uniform across jurisdictions is required for the asset management process.

Anticipated benefits of a uniform definition of maintenance:

- Clearer communication will lead to reduced ambiguity about where and on what type of work funding may be spent.
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The Committee recommends that any asset management-based formula take into account the need for a base level of funding for the routine maintenance of all roads.

- The asset management process should provide direction in establishing a *base level of funding for the routine maintenance* of all roads.

Anticipated benefits of establishing a base level of funding for routine maintenance:

- No category of road will “fall through the cracks.” Appropriate levels of funding will be set such that higher function roads can attain higher performance standards, and every type of road will have routine maintenance addressed through the base funding level.
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The Committee recommends that roadway assets be managed so as to maximize performance at the lowest life-cycle cost, including agency first cost, lifetime maintenance cost, and user costs.

- Investment strategies should include a consideration of long term costs which may be affected by the level of short term investment.

Anticipated benefits of life-cycle cost analysis:

- Use of *life-cycle cost* analysis will encourage preventive maintenance.

The Committee recommends that all road agencies seek warranties from construction contractors, where appropriate. Legislation should encourage experimentation with warranties covering the design and construction of roads and bridges, without mandating warranty details or particular applications.

- Legislation should permit and encourage *design and construction warranties*, but not impose restrictions on the process that impede experimentation.

Anticipated benefits of design and construction warranties:

- An improved process and a guaranteed return on the use of taxpayer dollars will result.
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The Committee recommends that the distribution percentages to road agencies in the current formula be continued unchanged until implementation of an asset management process, which may result in future distribution changes. Any future distribution changes should be phased in, to accommodate planned construction.

- A *distribution formula* based upon the recommended asset management process may (or may not) result in changes to distribution percentages for the state, the counties, and the municipalities. Attainment of appropriate performance standards will be the goal for all road classes and the asset management process will take this into account.
- Until the uniform data, performance standards and other components of the asset management process have been developed, the distribution percentages to road agencies in the current state revenue formula should continue unchanged.
- While this recommendation was made in consideration of state revenue distribution, federal funds should also be distributed based on asset management principles, consistent with federal law. Federal funds are more restrictive, in terms of which roads and which categories of road work are eligible.

Anticipated benefits of continuing the current distribution formula unchanged:

- This will allow time for development of the asset management process and ensure that no one is “taken by surprise” with respect to any changes which may occur.

The Committee recommends that a Technical Advisory Panel be responsible for oversight of the components of the asset management process.

- This panel will include representatives from all of the transportation agencies that provide services, as well as other parties with a transportation or state economic interest.
- The panel will provide more detailed direction, oversight, and uniformity across jurisdictions.

Anticipated benefits of a Technical Advisory Panel:

- Performance measures, standards, and other components of the asset management process will be set by those closest to transportation funding and infrastructure —stakeholders who have a stake in the process and the outcomes.
- This required partnership can contribute toward improved trust among transportation providers.

The Committee recommends that the Legislature evaluate the Technical Advisory Panel's periodic performance reports and take appropriate action.

Anticipated benefits of performance reports :

- Comprehensive review by all interested stakeholders of system performance, road condition and revenue will create a “feedback loop” that is lacking at present.
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Other Committee Recommendations

We made important recommendations in areas beyond managing our transportation assets which also affect the overall system and how it is funded. Common themes among these recommendations include increasing the level of interaction among transportation and other agencies, and retaining the revenue raised in the transportation sector for expenditure on transportation infrastructure.

In the area of transit, we have adopted the recommendations — with important clarifications and modifications — proposed by the separate Act 51 Transit Committee, a committee created and appointed by the State Transportation Commission. The Transit Committee spent months working with transit providers, customers, and governmental agencies in order to arrive at recommendations which accord well with our Vision, Mission, and Values.

The Committee recommends that local officials coordinate with state and local road agencies as part of the planning process. Land development and transportation should be considered together, to maximize the utility of existing infrastructure and the effectiveness of new investment.

- We recommend greater cooperation, information flow and interaction among all parties affected by *land use planning*.

Anticipated benefits of increased coordination in the area of land use planning:

- This will result in reduced costs, and increased efficiencies and effectiveness.
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The Committee recommends that the three units of government that have the ability to levy ad valorem taxes for roads (counties, municipalities, and townships) be represented on county road commissions.

- Our intention is that townships have a greater level of involvement in the planning and road decisions made by county road commissions.

Anticipated benefits of increasing the role of local government:

- Township residents, who make up the fastest growing segment of our population, will be able to provide feedback as to what road priorities should be in the areas where they live.

The Committee recommends that a system be implemented to explore alternative ways of generating transportation user fees. To this end, the Governor should create a special committee to look at alternative sources of revenue that could become viable alternatives to existing revenue resources.

- As fossil fuels are replaced by other energy sources, we recognize the need to create an *alternative revenue source* that is not related to fuel of any type, but is directly related to use of the transportation system and addresses the damage caused by that use.

Anticipated benefits of exploring alternative ways of generating revenue:

- This will put in place a mechanism to continue funding for road construction and maintenance even after fossil fuels are no longer in widespread use.
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The Committee recommends that the Legislature simplify the total diesel fuel tax collection system.

- The *diesel fuel tax collection system* presently in place is very complicated and the Legislature should take this opportunity to simplify it.

Anticipated benefits of simplifying the total diesel fuel tax collection system:

- Revenues intended for transportation will be collected more efficiently and paperwork will be eased for truckers.
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The Committee recommends that transfers from the Michigan Transportation Fund, the State Trunkline Fund, and the Comprehensive Transportation Fund to other state government departments be eliminated.

- The Fiscal 2000 *interdepartmental transfers* reflect a positive shift in the desired direction, relative to the years before 1997.

Anticipated benefits of eliminating interdepartmental transfers:

- As a continuation of the trend begun in 1997, this recommendation will allow more revenue raised in the transportation sector to be retained for expenditure on the transportation infrastructure.

The Committee recommends that in the next two years, all road agencies begin to allow competitive bidding by pre-qualified bidders on all road maintenance for an amount of work that exceeds a financial threshold to be determined by the appropriate parties.

- In the *competitive bidding* process proposed by the Committee, both public and private entities who are pre-qualified for such bidding would be eligible to make a bid.
- Standards for pre-qualification would be publicly available and sufficient to ensure the work will be appropriately done without being unnecessarily restrictive.

Anticipated benefits of competitive bidding:

- The example of other states demonstrates that millions of dollars can be saved through competitive bidding.
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The Committee concurs with the recommendations of the Act 51 Transit Committee report, with clarifications and modifications.

The entire Act 51 Transit Committee report is included as Appendix H to the full report. The Transit Committee recommendations are shown below. Where we required that clarifications and modifications to these recommendations be added, these are shown offset in *italics*.

- A new base funding level shall be employed to distribute funds between or among service types, based on population and population density within the areas.
- The formula shall be based upon an initial base funding level of 75 percent of Act 51 transit funds, declining over a five-year period to 50 percent, based on population and population density within the transit service area. Fifty percent of the balance of Act 51 transit funds shall be distributed each year based on cost-efficiency factors and 50 percent based on effectiveness factors. The factors utilized to determine the effectiveness of a transit agency in providing services shall be based primarily on the level of locally-derived income collected and expended on services within the agencies service area and, as well, a measure of how well the transit dependent and aggregate potential population in the agency's service area are being served.

— *We recommend that the importance of striking a balance between the two factors, efficiency and effectiveness, be recognized. We also recommend flexibility as the formula is implemented and evaluated.*

- Since a new formula may have negative financial impacts on some transit agencies it is recommended that the Legislature make transitional funds available to allow an orderly transition which accounts for a reduction in base funds over a three-year time period.
- Transit agencies shall be given the flexibility to use state transit funding for both operating assistance and capital investments.
- Any efficiency factors agreed to by MDOT and the transit industry shall be based on the concept that efficiency is defined as output divided by input. Effectiveness shall be based primarily on locally-derived income (LDI).

— We recommend that improving customer satisfaction and addressing unmet customer needs, as appropriately measured, be recognized as the ultimate performance goals.

- MDOT shall reduce the administrative costs for the Bureau of Urban and Public Transportation (UPTRAN) to “best in class” when compared to other state programs similarly structured.
- Increase total state transit formula funding after transit agencies have implemented efficiency and effectiveness measures to the extent that these funds will continue to increase the efficiency and effectiveness of transit operations.

— Although this recommendation was deleted from the final Act 51 Transit Committee report, we continue to endorse it. It is important that increased funding be available to transit, to reward increases in the efficiency and effectiveness of transit operations.

- Provide financial incentives to transit systems to establish coordinated regional services where the demand for such services exists. Funding for the incentives shall come from sources other than current state operating formula assistance funds. It is not the intent of this committee to duplicate services.
- The Detroit Department of Transportation (DDOT) and the Suburban Mobility Authority for the Region Transportation (SMART) shall develop a coordinated regional transit system to better serve the Detroit metropolitan area more effectively and efficiently.
- Require a competitive bidding process for the delivery of new regional transit services to ensure that private and inter-city carriers have the opportunity to provide those services.
- The Michigan Department of Transportation and the transit industry shall continue to work cooperatively to increase federal transit funding to Michigan.

- The local transit agencies shall provide matching funds for federal transit capital grants received, as prescribed by federal law.

— In agreeing with this recommendation, it is our intent that funding passed through to local transit agencies will not be lessened.

- Consolidate (at least in an accounting process) existing transportation funds from all state departments and agencies, other than MDOT, and distribute such funds to the intended beneficiaries through a voucher system consistent with federal requirements.
- The state and transit providers shall establish, or continue to implement, a competitive bidding process for private operators to compete for the provision of existing and new transit services.

— We add the following modifications: The competitive bidding process, whether newly established or continued in implementation, should be for public as well as private operators. Up to two years should be allowed for implementation of this recommendation, consistent with our recommendation regarding competitive bidding in the highway mode.

- Eliminate the Comprehensive Transportation Fund state operating subsidy to AMTRAK and make the funds available to local transit agencies.
- Transit agencies shall conduct periodic assessments of unmet transit needs within their communities and regions.
- Transit agencies receiving state transit funds shall develop five-year plans complete with goals and objectives that identify unmet transit needs regionally and within defined service areas. The State Transportation Commission (STC) should form a standing committee to periodically review and evaluate the revised transit funding mechanism and how well agencies are progressing in achieving goals and objectives. A standing committee of the STC should require UPTRAN to develop and publish an evaluation and reporting process that allows the taxpayers and the transit operators to see how the transit agencies do in efficiency and effectiveness measures.

— We further recommend that the five-year plans developed by transit agencies receiving state transit funds should be fiscally constrained.

Anticipated benefits of adopting these Transit recommendations:

- As the transit agencies successfully implement the efficiency and effectiveness measures, customer satisfaction will increase and taxpayer dollars will be spent more efficiently.
 - As efficiency and effectiveness increase, community support for transit systems, and ridership, should also improve.
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Conclusion

In summary, these recommendations comprise a forward-thinking approach to funding and managing the entire transportation system in Michigan. Other states and individual transportation agencies have always used the asset management concept for that portion of the system over which they have responsibility. Michigan is poised to be the first to apply this sound business practice on a statewide, cross-jurisdiction basis.

With the adoption of these recommendations, Michigan will be well along the way to attaining the Committee's vision:

In ten years Michigan will have the best multi-modal transportation system in North America as compared to other states and countries and as measured by customer satisfaction.